

WAWONA ROAD

Yosemite National Park Roads and Bridges
Between South Entrance and Yosemite Valley
Wawona
Mariposa County
California

HAER NO. CA-148

HAER
CAL
22-WAWO,
4-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
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I. INTRODUCTION

Location: Wawona Road (South Entrance Road, California Highway 41), between South Entrance and Yosemite Valley, Yosemite National Park, Mariposa County, Wawona, California.

UTM: Old Wawona Road
South end: approximately 1.5 mi. NE of Wawona
Wawona quadrangle
11/263460/4159200
North End: Yosemite Valley
El Capitan quadrangle
11/266375/4177650

New Wawona Road
South end: 1 mi. S of South Entrance
Fish Camp quadrangle
11/267335/4153080
North end: Yosemite Valley
El Capitan quadrangle
11/266375/4177650

Date of Construction: Old road: 1875
New road: 1932-33

Designer and Builder: Old road: John Conway, engineer
Washburn group, builders
New road: Bureau of Public Roads

Present Owner Yosemite National Park, National Park Service

Present Use: Park highway

Significance: The most successful of the Yosemite toll roads, the Wawona Road remains the chief entrance road to the park from southern California.

Project Information: Documentation of the Wawona Road is part of the Yosemite National Park Roads and Bridges Recording Project, undertaken in summer 1991 by the Historic American Engineering Record.

Richard H. Quin, Historian, 1991

II. HISTORY

This is one in a series of reports prepared for the Yosemite National Park Roads and Bridges Recording Project. HAER No. CA-117, YOSEMITE NATIONAL PARK ROADS AND BRIDGES, contains an overview history of the park roads.

A. HISTORY OF THE OLD WAWONA ROAD

The Wawona Road (South Entrance Road, California Highway 41) connects the Yosemite Valley with park developments at Wawona, the Glacier Point Road, and the main approach to Yosemite National Park from southern California. The 26.86-mile road is open year-round. The road was the most-traveled entrance road into Yosemite National Park before the completion of the All-Weather Highway in 1924, and still carries large numbers of travelers into the park from the south.

The Wawona Road is the main entrance to Yosemite National Park from the south. It enters the park 4 miles south of the village of Wawona, continues north along the southwest edge of the park as far north as Turtleback Dome, at which point it veers east northeast and down into the Yosemite Valley. The road was originally promoted by Galen Clark, the first Guardian of the Yosemite Grant, and who had considerable business interests on the South Fork of the Merced River at what is now Wawona. The road was to have provided access for tourists to the Mariposa Grove of Giant Sequoias and the Yosemite Valley to its north. The road roughly follows the route to the Yosemite Valley taken by the Mariposa Battalion in 1851.¹

Inspired by reports from the military expedition, tourists began visiting the Yosemite Valley, beginning with the James Hutchings party in 1855. Two other visitors that year, Milton and Houston Mann, saw an opportunity for profit in providing better access to the valley, and with their brother Andrew undertook construction of a toll trail between Mormon Bar below Mariposa and the Yosemite Valley. Their route used existing Indian trails as far as present Wawona, then followed another along Alder Creek towards the rim of the valley at or near Old Inspiration Point before dropping to the floor near the base of Bridalveil Fall. This path was known for a while as the "Mariposa Trail." The present Alder Creek and Pohono trails roughly follow much of this route.²

The Manns' trail, completed in August 1856, was hailed as "a vast improvement on the original [trail], and a comparatively safe route for saddle and pack animals."³ The Manns spent between \$700 and \$1000 on their trail, and on 4 August 1856 were authorized by the Mariposa County Board of Supervisors to collect tolls for its use. The tolls were collected at White & Hatch's Ranch, twelve miles out from Mariposa. Use of the trail was never heavy, and in 1860 the Manns sold their route to Mariposa County, which made it a free trail. By this time, it was considered inadequate for the use of most visitors. Mariposa County businessmen quickly became interested in establishing a wagon road to the valley in order to attract Yosemite-bound tourists. Among these was Galen Clark, who settled alongside the trail at its crossing of the South Fork of the Merced and began to provide meals, lodging and other services to visitors. In 1856, he built a horse trail from the Manns' route into the Mariposa Grove of Giant Sequoias.⁴ To attract more visitors to his hostel, Clark was actively involved in the promotion of a road from South Fork to Yosemite Valley.

Clark and several others formed a road company in 1862 with the aim of developing a 16-mile wagon route into the South Fork area, but apparently no construction was undertaken. Following a flood in 1862, Mariposa Countians subscribed \$300 for trail maintenance, and Clark himself rebuilt two bridges

the following year.⁵ Despite the lack of a substantial appropriation for major road construction, Clark made some other improvements to ease access to his simple lodgings. He replaced early foot logs and crude bridges across the South Fork with an open pony-truss wooden bridge in 1868; though altered and reconstructed several times, the structure survives [HAER No. CA-106] and is the oldest bridge in what is now Yosemite National Park. That same year, Clark was instrumental in the organization of a toll road company, "The Mariposa and Big Tree Grove Turnpike Company," which intended to build a toll route between Mariposa and Clark's (Wawona) and eventually on to the Valley.⁶

This company's supporters had hoped that the California legislature would purchase the route, since the Mariposa Grove of Giant Sequoias was an important part of the Yosemite Grant. However, the state refused to appropriate the funds. This dampened of enthusiasm among the road's backers. Nevertheless, the completion of a wagon road from Mariposa to White & Hatch's ranch, twelve miles from Clark's, in 1866 encouraged Clark and his allies to push for the construction of a road on to the Big Tree Grove and Yosemite Valley.⁷

In March 1869 the company reorganized as the "Mariposa Big Tree and Yo Semite Turnpike Company;" Galen Clark was elected president, J. B. Campbell secretary and Edwin Moore treasurer. Clark reported that the road company had been "demoralized" by the lack of interest from potential backers, and stated that the group was to apply to the Mariposa County Board of Supervisors for permission to collect tolls. He urged support for the road in the 17 December 1869 Mariposa Gazette, asking, "Are the people of the Mariposa route to Yo Semite Valley willing to lose the travel rather than assist in making a wagon road further to the place?" He pled for money or material aid, warning "The road must be made as far as the South Fork of the Merced next Spring, or Mariposa will lose her share of the travel."⁸ Clark might have mentioned that he needed the road completed to that point himself, as he had invested heavily in the venture, and had been forced to mortgage some of his properties. On 7 December 1869 he conveyed a half interest in his buildings, lands and the toll bridge to Mariposa County Recorder Edwin "Deacon" Moore and Moore's silent partner, Henry S. Rockwell, for \$2,000. The settlement was then known as "Clark and Moore's."⁹

The "Mariposa Big Trees and Yo Semite Turnpike Company" reorganized again in 1870; it now had the backing of some additional Mariposa County investors. John Wilcox, a Mariposa businessman was president; Moore was secretary, and Clark treasurer.¹⁰

A survey of the planned road by Jarvis Kiel was quickly completed and by the summer of 1870 the "Chowchilla Mountain Road" was open from Mariposa via White & Hatch's Ranch to Clark & Moore's on the South Fork. The road cost \$12,000, half being put up by Clark and \$2,000 by Edwin Moore, with the balance from a mortgage on their holdings. On 10 June 1870, the Mariposa County Board of Supervisors authorized the builders to collect tolls from travelers. The first stagecoaches, owned by Henry Washburn of Mariposa and two partners, were began carrying passengers over the road.¹¹

Although Clark was a Commissioner and the first Guardian of the Yosemite Grant, he apparently had a great difficulty in securing his promised salary. This shortcoming, coupled with his ambitious building and promotion projects, forced him into a series of additional mortgages. By this point, only the extension of the road from his development on the South Fork on to the Yosemite Valley seemed likely to put him out of debt. However, completion of the Chowchilla Mountain Road renewed hopes for drawing in more Yosemite tourists, and in May 1870 Clark and Moore opened "Clark's Station," a rustic

lodging that was the predecessor of the Wawona Hotel. Clark depended on Moore and Moore's capable wife, Huldah, to operate the inn while he was involved in road promotion and construction.¹²

Clark also sought to have a wagon road constructed from the South Fork to the Mariposa Big Tree Grove, roughly following the route of his old saddle trail. In December 1873, R. B. Thomas of Mariposa provided Clark with a \$3,500 estimate for a road connecting the South Fork with the west boundary of the Mariposa Grove grant, and \$2,500 for an extension through the grove.¹³

The Mariposa Big Tree Grove and Yo Semite Turnpike Company engaged ex-mining engineer John Conway, noted for his construction of a number of Yosemite trails and the circuit road around the Valley, to survey a route from the South Fork to the Valley. On 13 June 1873, the Mariposa Gazette reported that the partners planned to extend the road to the Valley before the 1874 season commenced, and reported the route as following their existing trail as far as "the Hermitage," 3 miles from the Valley, to a point opposite the Cascades, then up the bluff over Turtleback Dome and from there down into the Valley. Conway completed his survey on 12 August, reporting that the new road would have a maximum grade of 5 percent, less difficult than had been expected; work could commence soon.¹⁴ But Clark and his partners were already under financial strains, and were unable to complete the road themselves.

In July 1873, the "Mariposa Big Tree Grove and Yosemite Road Company" was authorized to collect tolls on the new road as soon as it was completed. The following rates were set:

Horse/buggy, or saddle animal	\$1.00
Buggy and two horses	2.00
Each additional animal	1.00
Pack animals	25¢
Loose stock	10¢
Goats, sheep, hogs	05¢ ¹⁵

The completion of the Coulterville and Big Oak Flat roads to the Valley in 1874 ahead of the Wawona Road lessened interest in the new route and in Clark's enterprises on the South Fork. The over-extended road company placed its last hopes in an act introduced into the state legislature that summer that would have provided for state assistance in the construction of wagon roads into the Valley, part of which would have established a special tax of eight mills per \$100 of taxable property to be vested in the "Yo Semite and Mariposa Big Tree Grove Park Turnpike Fund."¹⁶ The bill, however, got nowhere. Already severely in debt, Clark and Moore were forced to sell out to the firm of Washburn, Coffman & Chapman later in the year.¹⁷ This company had been running stages from Mariposa over the Chowchilla Mountain Road as far as Clark & Moore's, and anticipated a much greater demand for business with the extension of the road to the Valley.

The new firm hoped to complete the road in order to secure a controlled route (and monopoly) for stage businesses from Mariposa and Merced, as well as the tolls which could be collected. They had the support of the Southern Pacific Railroad, which built a connecting line to Raymond. The owners were Albert Henry Washburn, a native of Putney, Vermont with considerable business interests in Mariposa, including the stage line that carried passengers into the South Fork area; William F. Coffman of Princeton, the Mariposa County Assessor; and Emery W. "Wash" Chapman, a prominent Merced businessman. This new cartel undertook the completion of the road between Clark & Moore's and the Yosemite Valley.¹⁸ The Mariposa County Board of Supervisors issued the

group a permit for construction of a toll road from the South Fork to the Valley in November 1874.¹⁹

Washburn had run a stage line out of Madera at first, basing the operation out of the Yosemite Hotel there. The stage line ran via the Coulterville Road through the Merced Grove of Giant Sequoias. After a while, the base was shifted to Merced. A series of disputes there led Washburn to consider the construction of a new road through the South Fork area.²⁰ For a while, the Washburn stages used the Chowchilla Mountain Road to reach what is now Wawona.²¹ After acquiring Clark and Moore's stand, the Washburn group operated it as "Big Tree Station;" this was the immediate predecessor of the Wawona Hotel.²²

The Washburn group contracted with John Conway and Edwin Moore for the construction of 15 miles of the new road, from the South Fork to "the Hermitage," a point 4 miles from the Valley. Conway and Moore were to receive \$10,000, but the Washburn cartel was to provide supplies and do all the hauling. The work was to be completed by 1 May 1875.²³

Construction began on 4 December. The contractors employed Chinese laborers to construct the road, dividing them into two work gangs, based at Alder Creek on the south end and at Yosemite Valley on the north. John Conway, who had built the Four-Mile Trail from Yosemite Valley to Glacier Point and other trails to the top of Yosemite and Nevada falls, was overall engineer and contractor. Josephus (Joe) Ridgeway was in charge of the southern work gang, and James Ridgeway directed the northern crew.²⁴

The *Mariposa Gazette* reported on 9 January 1875 "The new road from the South Fork to Yosemite Valley is being pushed forward with determined zeal by men of indomitable energy possessed of ample means." Unseasonably warm weather allowed construction to proceed through most of the winter. By February, the contractors had 200 men at work on the route. On 20 March, the *Gazette* reported that 13 miles had been completed from Big Tree Station, and that Yosemite-bound tourists were already traveling as far as the temporary terminus. By 18 April 1875, the group had spent \$35,000 on construction. The road was extended to the Hermitage in May, and workers were constructing the section up from the foot of Bridalveil Fall.²⁵

On 3 May 1875, the Mariposa County Board of Supervisors set new rates of tolls for the nearly-completed road:

Passenger team, per horse	\$1.00
Freight, per pound	1.00
Horse and rider	1.00
Pack animal75
Loose animal75
Cattle25
Footmen25 ²⁶

Soon afterwards, the first stages began transporting passengers over the road between Mariposa and the Valley. The turnpike was still a little short of completion; passengers had to get out of the stages at "Lower Inspiration Point" and walk 300 yards along a rough, stretch of the road. In the meantime, the stagecoach was dismantled, lugged in pieces over the crest, and reassembled for the passengers to board. Most of the riders found this break an interesting novelty.²⁷

The Washburn group expected that the road would be complete by late June, and on the 12th a meeting was held in the Valley at the Cosmopolitan Saloon to

make arrangements for a "grand celebration." An advertisement for the celebration was placed in the *Mariposa Gazette* on 19 June, but a small line at the end stated that the celebration was "postponed until further notice." Work on the intervening section was still not complete. This short stretch was placed into service soon afterwards, and on 24 June 1875, the first passenger stage ran the entire route to the Yosemite Valley. The grand opening celebration for the new road was held on 22 July, with the a performance by the Merced Band, artillery salutes, and effusive poetry to mark the occasion. The festivities were topped off by cocktails at the Cosmopolitan Saloon and a ball which lasted all night. Galen Clark, who had done so much to encourage construction of the road, was a special guest,²⁸ though he must have been terribly disappointed at the failure of his own road plans. The newspaper referred to heavy drinking at the event. The temperature was over 100 degrees, but the *Gazette* noted that the participants were well-supplied with "preventatives and restoratives," and that no arrests for drunkenness had been made in Mariposa, as everyone had gone to the Valley.²⁹ The paper praised the merits of the new road:

The new road the completion of which was the cause of the celebration, receives the praise of all, as beside a piece of fine engineering and splendid construction, with very easy grades and passing through a continuous shade amidst the wildest and most beautiful scenery.³⁰

Construction of the route was a major achievement, and for the early travelers the trip must have been quite an adventure. The route was difficult, with a width of only twelve to 15' and grades as steep as 12 percent.³¹ It featured the steepest descent to the Valley of all the roads, the quick drop from New Inspiration Point. This final steep section crossed a rockfall called the "Washburn Slide" after the chief investor in the road.³²

The Yosemite Commissioners authorized a branch road to the Mariposa Big Tree Grove in 1878. This section was completed and opened by the following year; construction of the 2-mile route as far as the Big Tree grant boundary cost \$1,250. It left the main road 4 miles south of present Wawona (near the present South Entrance). A second branch road from Chinquapin Flat to Glacier Point was completed in 1882 at a cost of \$8,000.³³

Galen Clark's bridge over the South Fork needed repairs by this time, and it was covered over with boards sawn at his former sawmill, which had also been acquired by the Washburn group.³⁴ Washburn, a Vermont native, supposedly had the bridge covered as a reminder of his New England home,³⁵ however, like most similar bridges, it may have been covered to protect the main wooden trusses from the heavy snow loads typical of the Wawona area. The Washburns greatly expanded the nearby lodgings at Big Tree Station in 1879; this section became the main part of the Wawona Hotel.

In March 1877, Henry Washburn bought out his partners' interests and in November incorporated the "Yosemite Stage & Turnpike Company" to carry passengers and freight from Merced to "Big Tree Station," the Yosemite Valley, Glacier Point, Nevada Fall and the Mariposa Grove, as well as to points outside the park including Fresno Flats (Oakhurst), the Fresno Grove of Giant Sequoias, and Madera. The company also supplied conveyances and livery services for visitors to the Yosemite Grant and the big trees. Until the end of the year, the South Fork and Yosemite Turnpike Road was administered separately by Washburn, John B. Bruce and J. J. Cook, Washburn's new partners in the South Fork properties; however, in December 1877 the two concerns were consolidated. The stage road to Fresno Flats was completed in 1879, and the Madera road was opened in 1881 at a cost of \$60,000.³⁶ Madera was important

to the cartel, as the Southern Pacific Railroad operated a branch line to this point, and the new rail link brought in many Yosemite-bound tourists.

The company maintained a series of stations on the road for servicing the stages; these were spaced at roughly 4-mile intervals. Within the park boundaries, the stations were Four Mile Station (the point from which the branch line to the Big Tree Grove departed), Wawona, Alder Creek, Eight Mile Station, Eleven Mile Station (sometimes called "West Woods"), Chinguapin Flat, Grouse Creek and Fort Monroe. Each station had a water source, stables, corral, and a cabin for the keeper.³⁷ The company ran 6-horse stages at first, later switching to lighter 4-horse rigs. A snow plow was placed in service on the road in April 1876.³⁸

By 1885, Washburn had convinced the Southern Pacific Railroad to extend service from their line at Berenda 22 miles towards Yosemite. The new terminus, Raymond, became the main departure point for Yosemite Stage & Turnpike Company coaches. Washburn and his partners added a hotel there as a part of their investment, and also operated a hotel in the Yosemite Valley.³⁹ The road now left Raymond in Madera County and continued northeast to Wawona, near which point it was joined by the existing Chowchilla Mountain Road. From Wawona, the road continued north into the Valley, a total distance of 73 miles from Raymond, 26 of which were in the present park boundaries.⁴⁰

The Wawona Route, with its stunning view of the Valley from Inspiration Point, was soon considered the most scenic route to the Yosemite Valley, and Wawona (which was still outside the park boundary) became an important staging area. As many as 11 stages a day ran from Raymond to Wawona and on to the Yosemite Valley. The 71-mile trip to the Valley regularly took 16 hours, but the special and more expensive "Cannonball Stage," inaugurated in 1901, could convey a tourist in only 12 hours.⁴¹ The Washburns were by this point carrying the bulk of the Yosemite passengers in over the Wawona Road.

In 1881, Washburn and Bruce engaged Lyman, Otis and Ben Scribner to cut a hole through a giant sequoia at the Mariposa Grove. The 8' wide, 9' high and 26' long hole was Yosemite's second "tunnel tree," following the bore through the "Dead Giant" in the Tuolumne Grove in 1878. The "Wawona Tree" became one of the most famous sites in Yosemite, and tens of thousands of tourists and influential visitors passed through before it fell in 1969.⁴² Some time later, a second sequoia in the grove, the "California Tree," was tunneled through; it still stands, but the road has since been diverted away.

Big Tree Station was renamed "Wawona" in 1882 at Mrs. Washburn's suggestion. The name was believed to be a Mono Indian name for the giant sequoia, taken from the hoot of the great owl that was the guardian spirit for the tree. Today, some etymologists question this interpretation, but the name has persisted. The Indians had called the Wawona area "Pallahchun," meaning "a good place to stop," in reference to Clark's earlier lodgings.⁴³

The Wawona Road was generally open from April to December, but was used year-round during occasional fair winters. It was apparently a profitable venture; tolls collected (including those on branch routes) from 1882 to 1898 totalled \$221,254.78, offsetting construction costs of \$76,750 and maintenance costs of \$65,636.78.⁴⁴

The Wawona Road holds the dubious reputation of being the scene of the first stage holdup in the Yosemite area. On 13 August 1883, a Yosemite Stage & Turnpike Company coach driven by Ernest Stevens was robbed by three masked men, who relieved the passengers of \$2,000 in cash and jewelry. Henry

Washburn posted a reward, but the perpetrators were never caught. For the next 37 years, holdups were periodic inconveniences on the route.⁴⁶

By 1888, interests in Mariposa County were angry at the monopoly on transportation to the Valley created by the group's control of the toll road. A special election was held, and the county voters passed a bond resolution for \$75,000 to build a new road from Mariposa to Yosemite Valley, and a route to Coulterville, which was already connected to the Valley. The Washburn cartel, which stood to lose much profitable business, challenged the holding of the special election and gained an injunction from the state supreme court. The court later upheld the Washburn group, and the new Mariposa road was forestalled and never built.⁴⁶ However, that year the Washburns conveyed to the government the 7 miles of the road north of Fort Monroe for \$8,000.

For years, Wawona was not included in the National Park, but served as a stopping point for travelers bound for the valley. Galen Clark's rustic stand was the first facility here, but his successors, the Washburn group, developed a fashionable resort, replete with the grand Wawona Hotel, Hill's Photographic Studio, and other attractions. The Wawona area was brought into the park in 1932. The Washburns sold their holdings to the National Park Service, which in turn leased the hotel and other concessions to the Yosemite Park & Curry Company for operation.

By 1900, the Federal government was studying a takeover of the remainder of the Wawona Road within the park and its conversion to a free road. Henry Washburn made a strong argument for the road's importance in testimony presented to the Senate-authorized Commission on Roads in Yosemite National Park:

Since the construction of this road, a large majority of the tourists visiting the Yosemite Valley have selected it as their route of travel, induced to do so by the location of this road into the Mariposa Big Tree Grove and the points of interest on this road, including Inspiration Point and Glacier Point; also because this road traverses the National Park and enters the valley on the south side thereof, where the most comprehensive views of the wonder of the valley are maintained, and the most beautiful paintings and photographs of Yosemite views are taken from the south side. I also take into consideration the fact that the making of this road a free public highway will remove from the owners the protection now afforded by the tolls fixed by the said [Mariposa County] board of supervisors.⁴⁷

He stated that the road was open from April through December; maintenance costs ran \$2,640 annually.⁴⁸ Washburn was not opposed to selling the road to the government, provided he got a suitable price. However, even though the Commission on Roads recommended immediate purchase of the toll roads, the government did not take control for another 17 years.

On 22 June 1900, the first automobile to enter Yosemite came in on the Wawona Road. The steam-powered Locomobile was driven down the road from Wawona by Oliver Lippincott, a Los Angeles photographer and advertising man. People were amazed that the machine had reached the area, and Lippincott took a number of the Wawona Hotel guests for a ride on the hotel drive. The next day, Lippincott drove to the Valley, covering the 30 miles in three hours flat. Just over a month later, Frank H. and Arthur E. Holmes brought in the second car over the road, a Stanley Steamer.⁴⁹

A few other cars entered the park on the Wawona Road until soon after the Yosemite Grant lands were re-ceded to the Federal government to become a part of Yosemite National Park. In June 1907, the Acting Superintendent of the National Park, Major Harry C. Benson, banned all motor vehicles from the Park. The ban remained in effect until 1913.

The completion of the Yosemite Valley Rail Road to El Portal and construction of a year-round wagon road [HAER No. CA-150] from that point to Yosemite Valley enabled the Yosemite Transportation Company, a rival stage company, to capture much of the Yosemite Stage & Turnpike Company's business. In 1910, the Southern Pacific discontinued operations to Raymond, and use of the Wawona Road declined sharply. Eventually, the Washburn group made arrangements to run stagecoaches from El Portal to the Valley and on to Wawona, but El Portal remained the main point of entry to the National Park.⁵⁰

In 1909, the park engineer reported substandard conditions on the Government's portion of the Wawona Road (between the base of Bridalveil Fall and the Hermitage):

The road is dusty, steep, narrow and rough. An entirely new location would be needed to obtain a proper grade, and this would mean very expensive construction work, i.e., not less than \$30,000 per mile. To improve the existing road it should be widened and ditched on the inside with a paved ditch and then proper drainage provided, with culverts. The total elimination of water breaks (which are much complained against by drivers and passengers) is not recommended, since it would endanger the road. About \$3,000 per mile will make great improvements on the Wawona Road.⁵¹

Pressed by motorists, automobile clubs and civic groups, Secretary of the Interior Franklin K. Lane lifted the Yosemite Park ban on automobiles in April 1913. However, automobiles were to be restricted to passage over the Coulterville Road. The Washburns lobbied to have the Wawona Road reopened as well, but the Interior Department deferred, believing one road sufficient for automobile passage. Representative Julius Kahn met with Assistant Secretary of the Interior Miller and was told that the Park Service expressed concerns about the safety of the narrow Wawona route.⁵² Assistant Secretary Miller was invited to ride over the road while on a visit to California, but was somewhat inconvenienced when the party's conveyance was halted by a fallen tree on the road at Chinguapin. William Gordon, the barn boss at Chinguapin, refused to help move the tree, and the Secretary's party had to saw up the log in order to continue the trip.⁵³ This did little to encourage the opening of the Wawona Road.

Business interests to the south of Yosemite National Park, however, added their criticism of the choice of the Coulterville Road, and urged that the Wawona and other roads be opened to automobile traffic. In June 1913, the *Fresno Republican* complained that tourist services in the area were being put at a disadvantage by the restriction, and stated that resorts around Wawona and Miami were filled with motorists who could proceed no further on account of the ban. The *Madera Tribune* accused the Yosemite Valley Rail Road of wining and dining Park Service officials to choose the worst of the park roads so as to limit competition from automobiles.⁵⁴

The National Park Service relented and agreed to open the other roads. The Wawona Road was quickly repaired and reopened to automobiles on 8 August 1914. The Washburns still controlled the road as far north as old Fort Monroe, and charged a toll of \$1.25 for its use by automobiles. The federal government made \$2,500 worth of improvements to its stretch descending into Yosemite

Valley from Fort Monroe.⁵⁵ The branch road to Glacier Point was also opened to cars, and quickly attracted much traffic.

In 1913, the Madera, Yosemite, Big Tree Auto Company was organized and began replacing the horse-drawn stages with buses. Two years later, the new company contracted with the Yosemite Stage and Turnpike Company to form the "Horseshoe Route," by which travelers would enter the park from Wawona and exit via El Portal and the Yosemite Valley Railroad. This option, which freed tourists from having to repeat a segment of their journey, was immediately popular. On June 1, the Yosemite Stage and Turnpike Company replaced its horse-drawn stages with an automotive service.⁵⁶

A competing line, Edwin T. Huffman's Madera Yosemite Big Tree Auto Company, began operating in 1913. The Yosemite Stage and Turnpike Company purchased a majority of stock in the new concern in order to protect its monopoly. Autos were operated only to Wawona until the automobile ban was lifted, at which point the auto stages ran all the way to the Valley.⁵⁷

A portion of the Government's section of the road, some 8,581', was upgraded in 1914. The grade was lessened in this section and a guard wall installed on the outer edge of the road to prevent automobiles from going over the cliff. Total cost of the improvements was \$2,723.50.⁵⁸

In 1917, the National Park Service took control of the Wawona Road and its Glacier Point branch, and eliminated the collection of tolls from users. The Yosemite Stage & Turnpike Company continued to operate an automotive transportation link between Wawona and the Valley on the road. Although the government had title to the road, little was done to maintain the route, as no money was appropriated for its upkeep.⁵⁹

A 1921 traveler's account describes a trip on the old Wawona Road through the park in a Pierce-Arrow:

About a mile from Wawona we found the cabin of the ranger who issues tickets for the south entrance to the park. The formalities detained us but a few moments, since, with the great influx of motor tourists during the exposition year, much of the original red tape was dispensed with. A copy of the rules and regulations was given us and the time of our entrance was stamped upon the ticket to be delivered to the superintendent at Yosemite village. The action of our small rifle was sealed and, with a friendly caution that it would be unwise to exceed the limit, we were ordered to proceed.

For some miles after entering the park we climbed the long, steady grade following the South Merced Canyon. always at a considerable distance above the stream, which we could see at intervals through the pines, flashing over its rock-strewn bed. There was scarcely a downhill dip in the road for the first half-dozen miles, and we could not but recall the distressing efforts of the horses as they toiled painfully upward on our former trip as we sat disconsolately enveloped in smothering clouds of dust. What a contrast we found in the steady, cheerful hum of our engine as it drove our car onward at not less than the permitted speed of fifteen miles, leaving the dust behind us and affording unhindered views of the endless panoramas of canyons and hills....

Continuing a few miles further we came to the top of the grade leading down into the valley. We recalled it as a steep, strenuous road, winding about sharp curves and often along the edge of sheer precipices which gave us many thrills from our high perch beside the drive of our four-in-hand. We had traversed mountain roads so much worse in the meanwhile that Wawona grade really seemed quite tame from a motor car and the ladies took only languid interest in its twists and turns.

We paused for a third time at Inspiration Point and we cannot help envying those who are so fortunate as to come into Yosemite by this road and thus get their first glimpse of the valley from Inspiration Point. Perhaps the view from Glacier Point is as glorious but one is not likely to come upon it so suddenly and is somehow expecting stupendous things, but Inspiration Point burst on the wayfarer from the Wawona all unaware and he sees unfold before him almost in an instant all the marvelous sights that have made Yosemite a world's wonder....

We proceeded slowly and cautiously down the steep switchbacks leading to the floor of the Valley, a long, low-gear grind, for regulations forbid disengaging gears on roads in the park. The decent (sic) did not seem nearly so precarious as when we first made it in the regulation coach-and-four--the road appeared to have been widened at the turns; maybe this was only our imagination, due to greater familiarity with mountain roads. We were enough at ease to enjoy the splendid vistas of the valley and mountains which were presented from a hundred viewpoints as we slowly descended, something that we hardly did the first time. Nor did the time seem so long, though I really doubt if we went down so quickly as our dashing driver piloted his coach-and-four over this three-mile grade on our first trip. We soon found ourselves on the floor of the valley with Bridal Veil Falls (sic) waving like a gossamer thread above us.⁶⁰

B. HISTORY OF THE NEW WAWONA ROAD

In 1917, the National Park Service acquired the Wawona Road from the Washburn interests. The transfer also included the branch road to Glacier Point. Over the next decade, the road required constant maintenance, including removal of rockslides, spreading gravel, and grading. Some fairly limited improvements were also made. In 1924, Park Service crews graded and widened 14 miles between Alder Creek Hill and the Mariposa Big Tree Grove. Gravel was spread over exposed clay on a section around Wawona.⁶¹

In May 1925, Park Service crews built a new turnout below Inspiration Point, and the Mariposa Big Tree Grove road was partially realigned in September. In the meantime, the U.S. Forest Service was surveying a new route between the Big Tree Grove and Mariposa. A bridge on the road over Alder Creek was replaced by two 48" culverts in October, and in November two sections of retaining wall between Grouse Creek and Inspiration Point were replaced.⁶²

The National Park Service and the Bureau of Public Roads (U.S. Department of Agriculture) signed a Memorandum of Agreement in July 1925, authorizing the planning and construction of new roads within Yosemite National Park. The BPR undertook a comprehensive study of the existing park transportation system and made recommendations for major upgrades and improvements to most of the park's roads. One of the main decisions made was to reconstruct the Wawona Road.

In July 1927, Stephen T. Mather, Director of the National Park Service, met with District Engineer Bonner of the National Forest Service to discuss the proposed plan to upgrade the Wawona Road. Mather told the Forest Service representative that the Park Service did not expect funding for the road reconstruction project for another four or five years, but agreed the road needed work, and said it would be desirable to spend \$50,000 on maintenance for and minor improvements to the present road. One thousand feet of the road was widened to 18' in October, and 11 culverts, ranging from 18" to 24" in diameter, were installed.⁶³

Mather announced the plans to upgrade the Wawona Road early in 1928. He stated that the project would make the Mariposa Big Tree Grove accessible year-round, and would also help promote additional winter sports and camping in areas away from the congested Valley floor. The new roadway was originally planned to enter from the south along Big Creek, bypassing Wawona. However, the owners of the Wawona Hotel objected, stating that the proposed bypass would decimate their business, and offered a 100'-foot right-of-way across their property. Although engineers had determined that the Big Creek route would have an easier grade and would cost less to construct, the Park Service agreed to Wawona route.⁶⁴

Engineer Henry S. Tolen of the BPR's San Francisco was sent to Yosemite to survey a new right-of-way. Tolen reported that the steep grades from Grouse Creek up to Inspiration Point and back down to the Valley were too steep for traffic requirements. He recommended that a lower route be established by constructing a new road along the bluffs below Turtleback Dome.⁶⁵

The National Park Service and the Bureau of Public Roads conducted two years of intensive studies concerning the effect the new road would have on the park landscape. The final survey set the route with a maximum grade of 6 percent for lengths not exceeding 2,000', and maximum radii of 200' for open curves and 300' for blind curves. Park Superintendent Charles Goff Thomson determined that the preliminary road realignment design and some proposed alternatives were unacceptable. He claimed "A road benched out of the palisades would have produced an irremediable scar, ruinous to the landscape. An underpass in the region of Bridalveil Fall was studied but finally rejected. And a zig-zag road would have been unsafe for modern traffic and would have made an appalling disfigurement." The plan finally adopted called for a new highway tunnel to be bored through the mountainside below Inspiration Point. By keeping the road's location high, 1,800' of the scarring on Turtleback Dome was eliminated, and the road's distance was reduced by .77 mile from the original survey. The road was designed around the 18' wide Forest Highway Standard. This decision was reached with the consensus of Park Service management, leading landscape architects, and the National Park Service Board of Expert Advisors for Yosemite National Park, composed of Dr. John B. Buwalda, Duncan McDuffie and Frederick Law Olmsted, Jr.⁶⁶

The chosen tunnel route initially met with opposition. National Park Service Chief Engineer Frank A. Kittredge pushed for a route up Grouse Creek and over Turtleback Dome, hoping to save Inspiration Point as a roadside feature. Park Service Assistant Director Horace Albright also favored the higher route because of Inspiration Point,⁶⁷ but the BPR route was ultimately accepted.

In May 1928, four miles of the new route between Alder Creek and Camp Hoyle (the Civilian Conservation Corps Camp near Wawona) had been surveyed, and a preliminary line had been run as far as Chinquapin. By the end of July, the line had been extended as far north as Avalanche Creek. The roadway was to closely follow the old road from a point north of Alder Creek as far as Bishop

Creek, but would involve new construction for the remaining segments. A rolling grade was chosen.⁶⁸

The first part of the clearing work was done by crews from Camp A. E. Wood, near Wawona. The 20-45 workers included axmen, fellers and buckers. Most of the work was done by hand, but a tractor was employed in difficult sections. The felled trees and brush were burned in the cleared right-of-way.⁶⁹

In August, bids were opened for the first part of the road to be reconstructed, the section between Alder Creek and Camp Hoyle. T. E. Connelly of San Francisco was the low bidder, agreeing to do the work for \$102,611.12, a figure 75 percent of the engineer's estimate. The bid was accepted on 20 September and clearing work for the right-of-way began four days later. Construction in this area was over 50 percent exposed rock, with additional exposed boulders along the right-of-way. Sugar pine was the predominant tree, and the most common understory growth was live oak and manzanita. The work was to include a reinforced concrete culvert, several corrugated pipe culverts, and two short sections of retaining wall.⁷⁰

NPS Junior Landscape Engineer John B. Wosky, Yosemite National Park Resident Engineer O. G. Taylor, Acting Park Superintendent E. P. Leavitt and his assistant, E. C. Solinsky met with BPR Engineer Henry S. Tolen to inspect the proposed route from Alder Creek to Chinguapin. Approval was given for construction as far as Bishop Creek, but the remaining section was deferred for study. The BPR established a field office at Camp Hoyle that fall.⁷¹

The bids for the 4.98-mile section of road between Eleven Mile Station and Alder Creek were opened in November. The award was given to Le Tourneau & Lindberg of Stockton, which entered a bid of \$104,580.50 for the project, only 61 percent of the engineer's estimate. The company soon admitted it had miscalculated its bid, and forfeited its \$3,200 surety deposit. On 4 January 1929, the contract was awarded to the W. A. Bechtel Company, which had bid \$107,094 for the work. Bechtel began its 200 days of allotted work days on 6 May. The contract called for grading of the road, installation of reinforced concrete culverts at Alder and Bishop Creeks and several corrugated pipe culverts.⁷²

Construction resumed in March 1929. That month, the Connelly company was building a reinforced concrete box culvert on its section at the crossing of Grapevine Creek, and the Bechtel Company set up a construction camp at Eight Mile Station. In May, Connelly had completed the clearing of all but 900' of its section; equipment included one power shovel, one compressor, a 30-Best caterpillar and four trucks. Bechtel had completed half of its bucking and clearing, and 15 percent of its cleanup work, and placed all of its culverts. Company equipment consisted in part of two compressors, two gas shovels, five trucks and a 60-Best caterpillar; another shovel was soon placed into service to help ensure the company met its deadline for project completion.⁷³

In June, all bucking and felling work was done on the two sections. Connelly had finished grading one mile, had rough graded another half mile, and had constructed a 3/4-mile pilot road, as well as finishing another box culvert. The work utilized a 3/4 yard Erie steam shovel and a 1 1/4-yard Osgood steam shovel. During the same month, Bechtel rough graded a 3/4-mile section and partly graded another quarter mile. The company sublet a portion of its work to the J. F. Collins Company of Stockton. In July, Bechtel put its forces on triple shifts in order to make better time, and by the end of the month, had rough graded 2 1/2 miles, and finished a reinforced concrete culvert at Bishop Creek.⁷⁴ The traffic work necessitated closing the road at night until about

25 July. Control stations were maintained at Alder Creek Ranger Station and Grouse Creek.⁷⁵

By the end of August, Connelly had completed work on 1.8 miles of its segment, and had rough graded another half mile. Bechtel had rough graded 4.1 miles, and its culvert at Alder Creek was 25 percent complete. In September, contracts were let for work on the 11-mile section between Eleven Mile Station and Grouse Creek; the chosen contractor was the Welch & Murdock Company. Welch & Murdock began work on 26 September; they established their construction camp at Chinquapin Flat.⁷⁶ This camp was later used for the reconstruction of the Glacier Point Road.

At the end of November, most of the clearing work for the new Wawona Road between Wawona and Grouse Creek was complete, and the section on to Turtleback Dome was well underway. The Connelly company was overdue by this point, and did not finish its work until 21 December. The section between Alder Creek and Eleven Mile Creek was complete and open to traffic. On the segment between Eleven Mile Station and Grouse Creek, Welch & Murdock had rough graded one mile, and a subcontractor had installed box culverts at Avalanche Creek and Grouse Creek. Welch & Murdock's equipment included two power shovels, four trucks and a caterpillar grader; 40 men were employed. On November 27, the Contoules Construction Company of San Francisco was awarded the contract for the 2.19-mile segment of the road between Grouse Creek and Turtleback Dome; their bid had totalled \$89,900.50. Clearing on this section began on 21 April 1930.⁷⁷

Contoules Construction Company proved a troublesome contractor. The company requested permission to build a "tote road" from the old road at Inspiration Point down to the new section on Turtleback Dome; its request was denied, as the Park Service feared the road would make an unacceptable scar. In July, the company was warned it was not adequately protecting trees and vegetation, it was using excessive amounts of blasting powder, and was sidcasting materials onto the slopes below the road in violation of its contract. The company persisted in these practices, and on 24 June the company was shut down until it brought in trucks to remove the blasted materials. On 21 July, Tolen shut down its operations again for excessive blasting. After two days, the company agreed to adhere to its contractual agreements, and work resumed.⁷⁸

Goerig & Dahlberg of Seattle, Washington was chosen as contractor for last section of the main road, between Turtleback Dome and the Yosemite Valley floor. This section included construction of the tunnel, as well as masonry retaining walls, reinforced concrete culverts and some corrugated pipe culverts. The first survey line was run in 1926, but the tunnel was relocated and the final survey of this section was not completed until December 1929.⁷⁹

While work on the Wawona Road was in progress, the NPS had a new road route surveyed to connect Wawona with the Mariposa Big Tree Grove. The initial survey, conducted in 1927, called for a road along Big Creek, but this route was rejected as it passed in part through a logged area. The route was resurveyed in 1929. Bids for grading and construction of the spur road were opened on 24 July 1930, and on 7 August the contract was awarded to the George Pollock Company of Sacramento, which had bid \$202,787.32. Pollock began work in August, employing 50 men with two power shovels, two trucks and a caterpillar grader. By the end of September, the company had rough graded one mile of its segment. At the same time, Contoules had rough graded a 2-mile section. Welch & Murdock had completed work on its 5.1-mile portion; it had sublet the construction of two reinforced concrete culverts at Grouse Creek and Avalanche Creek to J. C. McLeman.⁸⁰

By September 1930, the 7.67-mile section between the south entrance and Eleven Mile Station had been reconstructed and oiled with a dust-proofing material at a cost of \$297,183. The next section north, 6.59 miles between Eleven Mile and Grouse Creek, was one-third complete, as was the 2.19-mile section between Grouse Creek and Turtleback Dome.⁸¹

By the time construction of the tunnel began 30 November 1930, the new right-of-way from Wawona was complete. A crew of Civilian Conservation Corps (CCC) workers from Camp Hoyle near Wawona had cleared the route from Camp Hoyle to Turtleback Dome, a distance of 17.25 miles.⁸² This project was one of a number in the park which utilized CCC workers in order to provide for employment relief during the Great Depression.

Welch & Murdock completed its work on the construction of the section of the Wawona Road between Eleven Mile Station and Grouse Creek on 10 June 1931, behind schedule. T. M. Roach of the Bureau of Public Roads suggested in his completion report that the contractor's tardiness was due to its moving equipment around too much before excavations were completed. Rock from blasted areas was often cast down slope, and had to be pulled back, causing additional delays. Total cost of this section of the project was \$231,147.02, but Welch & Murdock was fined \$2,700 for being overdue.⁸³ The old section of road was obliterated at the end of the project. Contoules Construction completed its work on the Grouse Creek-Turtleback Dome section on 20 April.⁸⁴

The Wawona Basin was added to the park in 1932, following a series of land and timber exchanges with adjoining forest land owners and the U.S. Forest Service for parts of the roads right-of-way and a protected buffer through much virgin timber.⁸⁵ As a result, the old south entrance station was relocated from Alder Creek to Four Mile Station, the intersection of the Wawona and Mariposa Grove roads.

Relocation of the road also necessitated construction of a new bridge to replace the wooden covered bridge over the South Fork of the Merced River at Wawona. The National Park Service awarded the contract for construction of the new structure [HAER No. CA-104] to the George Pollock Company, which bid \$31,191 for the project. Work began on 9 May 1931, the contractor using 21 men, a compressor, a truck and a hand-operated derrick. The bridge was completed in October at a total cost of \$30,962.34. The 3-span steel I-beam bridge was originally faced with logs sections and had log guard rails.⁸⁶ The use of the materials reflected the National Park Service's prevailing "rustic style" of architecture used on other contemporary park bridges and structures. This bridge remains in use, but has unfortunately its original rustic log trim has been removed.

The 4,230' Wawona Tunnel [HAER No. CA-105] was largely complete by January 1932, when Superintendent Thomson drove the first car through the new bore. Work on the portals, ventilation adits and other features took another year and a half, and the tunnel was formally dedicated on 10 June 1933. Total cost of the structure was \$847,500.⁸⁷

The new alignment through the tunnel passed below the (new) Inspiration Point, which had been the favorite view for stage riders and early motorists entering Yosemite Valley. In its place, a new parking area and vista point was developed at the east end of the tunnel; at this point, called "Discovery View," the visitor gains a first look at the majestic valley. The wayside offers a stunning view of the glorious panorama and is considered by many to be even more dramatic than that from Inspiration Point.⁸⁸

The remaining work on the Wawona Road, including a branch section between Wawona and the Mariposa Big Tree Grove, was complete by the end of 1933. This section traversed an 8,765-acre addition to the park made the previous year. The Wawona Basin addition not only brought in a significant forest buffer to help protect the Mariposa Grove, but also gave the park room for the development of new campgrounds and other services.⁸⁹

When first constructed, the road was not paved, but rather graded then covered with a dust-proofing 4" penetration oil coat.⁹⁰ Following this work, the Granite Construction Company prepared a crushed rock base for later surfacing; this base course was completed on 21 October 1933, and paving ensued.⁹¹ Typical cross sections of the new road were 22' wide with 1' paved shoulders on either side. Where the old road was used for routing, a 24' wide mixed base was laid directly on the existing surface, then covered with a 2" hot bituminous concrete pavement. The entire section was then sealed with a coat of emulsified asphalt. On superelevated sections or slopes, an emulsified asphalt tack coat was laid on the old road, and hot bituminous concrete curbs were placed on the downhill side; these were backfilled with existing dike material where available. A countersloping paved waterway, varying from 1'-6' in width, was installed on the upslope side. Turnouts were also constructed, and were from 12'-15' wide.

Construction of had necessitated many roadside cuts and much grading work which had adversely impacted the landscape. To offset the damage, Superintendent Thomson issued instructions for a replanting program; this project was carried out under the direction of Dr. F. E. Clements, ecologist for the Carnegie Institution. The project began with a survey and classification of plants along the road, and experimental plantings were set out in 1932. Cuts that were too steep for replanting were graded down further to a maximum 2:1 slope. Runoff trenches were cut along the face of long or very steep slopes, and terraces were sometimes cut along the contours. Soil pockets, either natural or man-made, were planted. The other areas were then seeded with plants. Many native plants reestablished themselves on the slopes; in other cases, plantings indigenous to the park were used. The seeds were collected by Emergency Conservation Work personnel, and the planting work was done by the Civilian Conservation Corps. Among the wildflowers and plants used were lupine, penstemon, Yosemite strawflower, cliff asters, farewell-to-spring, pussy paws, Indian harp, yellow pea, shield plant, candle plant, creeping locust and ceanothus. Some of the shrubs used included thimble berry, blue elderberry, manzanita, woodbine, yerba santa, bear clover and chinquapin. The old roadbed was obliterated, beginning in November 1932.⁹²

Park planners were so concerned about the new road's appearance that they ordered CCC workers to paint the rock cuts and ledges around the Wawona Tunnel in an effort to conceal the newly exposed rock surfaces. The cuts, as well as the tunnel's concrete west portal, were sprayed with a mixture of lamp black, mineral spirits and linseed oil.⁹³

The new \$2 million Wawona Road was favorably received. The *San Francisco Chronicle* expressed admiration for the new route, declaring "Motoring to the Yosemite Valley has become a new and thrilling experience."⁹⁴ The old Wawona Road remained open from Bridalveil Fall to Inspiration Point until it was heavily damaged by the flood of 1937, at which point it became a pack trail.⁹⁵

The Mariposa Grove Road was paved in 1933 to allow for snow removal during winter, opening the grove as a year-round attraction. The work began on October 9, using Public Works Administration funds. The Granite Construction Company of Watsonville, California provided rock for the road base from its crusher, which was located near Wawona in the bed of the South Fork of the

Merced. The asphalt coating was placed by the American Bitumuls Company. The project also included landscaping work, including the planting of some young sequoias, and the filling of the borrow pit. Work was completed in the fall of 1934 at a cost of \$15,275.⁹⁶

In 1934, roads around the South Entrance Station were realigned and a parking area for thirty cars was constructed just inside the entrance. The parking spaces were originally set off by a redwood rail, since removed. The old checking station was removed at the same time. Public Works Administration funds were used for the project. At the Valley end of the road, a new parking area at the base of Bridalveil Fall was constructed and paved in late spring and summer of 1935.⁹⁷ The south entrance layout was revised again in 1939 or 1940 and a new checking kiosk was added. This was replaced in 1958 by a Mission 66 era structure which still stands.⁹⁸

On 16 October 1940, the Wawona and Glacier Point roads were formally relinquished to the National Park Service. They had been under construction or post-construction administration by the Bureau of Public Roads or its successor, the Public Roads Administration, since 1928.⁹⁹

The Wawona Road has been subject to periodic repairs and maintenance work. During the late fall floods of 1950, a 200-ton rock washed down onto the road blocking both lanes. One lane was reopened within a few hours, and the rest of the block was removed soon afterwards.¹⁰⁰ Washouts, rockslides, and forest fires have also closed the road over the years.

In 1960, the BPR San Francisco office authorized bids for the resurfacing of 3.5 miles of the Wawona Road between the Wawona Tunnel and the Valley floor, together with a 5-mile section of the Glacier Point Road. Harm Brothers of San Francisco submitted the low bid and received the contract. The work was completed by November at a cost of \$180,004.57.¹⁰¹

The Wawona Road enters the 6.32 miles southeast of Wawona, where it crosses the South Fork of the Merced River. From Wawona, it continues generally northward for 11.34 miles before reaching Chinguapin Flat at an elevation of 6,250'. A recent road study advises a 6' widening, the construction of additional turnouts, and some grade improvements. At a junction at Chinguapin, the Glacier Point Road departs to the east side of the road. From Chinguapin, the road descends steeply to Turtleback Dome over much exposed rock, then heads east northeast through the Wawona Tunnel, joining the South Road in the Valley below Bridalveil Fall. On this section, the Tunnel View parking area is known as a high-accident area, and several fatalities have occurred here. The tunnel itself is rated as being of substandard width, and scrapes and metal debris are evident where larger vehicles have grazed the tunnel walls.¹⁰²

III. ENDNOTES

1. Richard P. Ditton and Donald E. McHenry, *Yosemite Road Guide*, (El Portal, CA: Yosemite Association, 1989), 70.
2. C. Frank Brockman, "Development of Transportation to Yosemite." *Yosemite Nature Notes*, Vol. XXII No. 6, June 1943, 53-54.
3. Quoted in Shirley Sargent, *Galen Clark: Yosemite Guardian* (San Francisco: Sierra Club, 1964), 57.
4. *Ibid.*, 57-58, 60-61, 64; Carl Parcher Russell, *One Hundred Years in Yosemite* (Berkeley: University of California Press, 1947), 51.
5. Sargent, 64-65.
6. Brockman, 53-54; Linda Wedel Greene, *Yosemite, The Park and Its Resources: A History of the Discovery, Management, and Physical Development of Yosemite National Park, California*. 3 vols. (Washington: National Park Service, 1987), I:92, 94.
7. Shirley Sargent, *Yosemite's Historic Wawona*, (Yosemite, CA: Flying Spur Press, 1979), 14.
8. "New Road Company," *Mariposa Gazette*, 12 March 1869; *Mariposa Gazette*, 17 December 1869, 2.
9. Sargent, *Yosemite's Historic Wawona*, 14; Idem, *Galen Clark*, 88-89.
10. *Ibid.*, 14.
11. Sargent, *Galen Clark*, 90-91, 122.
12. *Ibid.*.
13. R. B. Thomas to Galen Clark, 27 December 1873. Yosemite Research Library Collection.
14. "South Fork and Yo Semite," *Mariposa Gazette*, 8 August 1873, 3; "The Mariposa and Yo Semite Wagon Road," *Mariposa Gazette*, 13 June 1873, 3; "Survey Completed," *Mariposa Gazette*, 22 August 1873, 3. John Conway was soon overseeing the final survey and construction work of the competing Big Oak Flat Road.
15. Mariposa County Board of Supervisors minutes, 7 July 1873, *Supervisor's Book "B,"* 656-57.
16. "The Yo Semite Road Bill," *Mariposa Gazette*, 16 June 1874, 3.
17. "Sale of the Clark & Moore Property," *Mariposa Gazette*, 26 December 1874, 3.
18. Sargent, *Yosemite's Historic Wawona*, 22; "Sale of the McCready Property: A New Firm and a New Road," *Mariposa Gazette*, 12 December 1874, 3.

19. Greene, I:107. Coffman sold out his interest in the enterprise in 1877, purchasing James M. Hutching's stock business in Yosemite the following year. (*Ibid.*, I:154.)
20. John C. Meyer III, *Yosemite: The Forest Domain of the Pierce-Arrow*, (Canoga Park, CA: Southern California Region of the Pierce-Arrow Society, 1984), 9.
21. Ralph René Mendershausen, *Treasures of the South Fork: Trails and History along the South Fork of the Merced at Yosemite's Front Door*. (Privately published, 1983), 21.
22. Sargent, *Yosemite's Historic Wawona*, 24.
23. "The New Road Contract," *Mariposa Gazette*, 19 December 1874, 3.
24. Ditton & McHenry, 81-82; Hank Johnston, *Yosemite's Yesterdays*, 2 volumes (Yosemite, CA: Flying Spur Press, 1989), I:45; Greene, I:108; Sargent, 23.
25. Sargent, *Yosemite's Historic Wawona*, 23; "That Road Again," *Mariposa Gazette*, 27 February 1875, 3; *Mariposa Gazette*, 20 March 1875, 2; "Yo Semite Items," *Mariposa Gazette*, 22 May 1875, 3.
26. Mariposa County Board of Supervisors minutes, 3 May 1875.
27. Sargent, *Yosemite's Historic Wawona*, 25.
28. "Enthusiastic Meeting! Grand Celebration in Yosemite," *Mariposa Gazette*, 19 June 1875, 3, 25.
29. "Yo Semite Celebration," *Mariposa Gazette*, 24 July 1875, 3; "Celebration of the Big Tree Station and Yo Semite Valley Road," *Mariposa Gazette*, 31 July 1875, 3.
30. "Celebration of the Big Tree Station and Yosemite Valley Road," 3.
31. Johnston, 45.
32. Sargent, *Yosemite's Historic Wawona*, 25. "Washburn Slide" still appears on topographic maps to mark the large talus field below Taft Point at the end of the old road.
33. Greene, I:108-109.
34. *Ibid.*.
35. Interpretive display at the Pioneer Yosemite History Center, Wawona, Yosemite National Park.
36. Sargent, *Yosemite's Historic Wawona*, 28-29, 32-33; "Stages, Railroads, Travel, Etc.," *Mariposa Gazette*, 12 March 1881, 3; "Yosemite Travel via Mariposa," *Mariposa Gazette*, 2 July 1881, 3.

37. Greene, I:109; Sargent, *Yosemite's Historic Wawona*, 24. Fort Monroe, southwest of Inspiration Point, was named after George F. Monroe, a popular black stage driver who carried passengers on the Yosemite run. (*Ibid.*, I:158.)
38. "Through to Yo Semite," *Mariposa Gazette*, 3 June 1876, 3.
39. Sargent, *Yosemite's Historic Wawona*, 37, 43.
40. *Ibid.*, 43; Greene, I:108-109.
41. Greene, I:156-57; Sargent, *Yosemite's Historic Wawona*, 53.
42. Sargent, *Yosemite's Historic Wawona*, 35.
43. *Ibid.*, 11, 39; Ditton & McHenry, 36.
44. Albert Henry Washburn to Col. S. M. Mansfield, U.S. Army Corps of Engineers, 31 October 1899. Copy in Yosemite Research Library Collection.
45. Johnston, 22, 33.
46. Greene, I:114.
47. Henry Washburn, testimony entered in "Report of the Commission on Roads in Yosemite National Park, California." Senate Document 155, 56th Congress, 1st Session, 8 February 1900.
48. *Ibid.*.
49. Johnston, 7-9, 11.
50. Sargent, *Yosemite's Historic Wawona*, 55.
51. Engineer's Report, in *Report of the Acting Superintendent of the Yosemite National Park to the Secretary of the Interior*, 1909 (Washington: Government Printing Office, 1909), Appendix A, 15.
52. Julius Kahn, Washington, to C. C. Higgins, San Francisco, 10 July 1913. Washburn Papers, Yosemite Research Library.
53. Littebrant, William, Acting Superintendent, Yosemite National Park, to S. G. Owens, Wawona, 24 September 1913. Washburn Papers, Yosemite Research Library collection.
54. "Open Wawona Road," *Fresno Republican*, 27 June 1913; "This Sounds Like a Voice from the Tomb," *Madera Tribune*, 31 August 1913.
55. Johnston, 17.
56. Greene, I:436-37.
57. Meyer, 9.

58. Park Engineer's Report, 30 September 1914, in *Report of the Acting Superintendent of the Yosemite National Park to the Secretary of the Interior, 1914*. (Washington: Government Printing Office, 1915), 18.
59. *Report of the Director of the National Park Service to the Secretary of the Interior, 1917*, (Washington: Government Printing Office, 1917), 844; Greene, II:543.
60. Quoted in Meyer, 27-29.
61. W. B. Lewis, Superintendent's Monthly Report, March 1924, 8.
62. Idem, Superintendent's Monthly Report, May 1925, 14; E. P. Leavitt, Acting Superintendent's Monthly Report, September 1925, 10; Lewis, Superintendent's Monthly Report, October 1925, 6; O. G. Taylor, Acting Superintendent's Monthly Report, October 1926, 3; Leavitt, Acting Superintendent's Monthly Report, November 1926, 6.
63. Leavitt, Superintendent's Monthly Report, July 1927, 2; Acting Superintendent's Monthly Report, October 1927.
64. "Information on the Construction of the Wawona Road, Based on Statements from Mr. Henry S. Tolen," typed MSS, 5 April 1948, 2-3. Yosemite Research Library collection.
65. Johnston, 45.
66. *Ibid.*; National Register of Historic Places nomination for the Wawona Tunnel, prepared by Linda Wedel Greene, March 1989, Sec. 7, p. 3; Bureau of Public Roads, Location Survey Route for the Wawona Road, Camp Hoyle-Turtleback Dome, 22 March 1932, 1-2; Idem, Location Survey Route for the Wawona Road, Camp Turtleback Dome-Valley Floor, 14 April 1932, 2, 3-4.
67. F. A. Kittredge, NPS Chief Engineer, to Dr. F. E. Mathes, U.S. Coast and Geodetic Survey, 3 April 1929, Yosemite Research Library; "Information on the Wawona Tunnel," 4.
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72. Idem, Acting Superintendent's Monthly Report, November 1928, 4; Henry S. Tolen, Bureau of Public Roads, Final Construction Report, Wawona Road, Alder Creek-Eleven Mile Station, n.d., 3-4. Yosemite Research Library.
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74. Idem, Superintendent's Monthly Report, June 1929, 9; Superintendent's Monthly Report, July 1929, 7.

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76. Thomson, Superintendent's Monthly Report, August 1929, 8; Superintendent's Monthly Report, September 1929, 7; Superintendent's Monthly Report, October 1929, 9; Tolen, Final Construction Report, Grading of Wawona Road, Eleven Mile-Grouse Creek (1928-29), 26 February 1930, 2.

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81. National Park Service press release, Wawona Road Reconstruction, September 1930.

82. Project Completion Report #60, Clearing of Wawona Road, April 1931. Yosemite National Park Maintenance and Engineering offices.

83. Tolen, Final Construction Report, Grading, Camp Hoyle-Alder Creek, 4-5, 21.

84. Greene, II:814; Thomson, Superintendent's Monthly Report, April 1931, 14.

85. Robert Charles Pavlik, "In Harmony with the Landscape: A History of the Built Environment of Yosemite National Park, 1915-1940" (Master's Thesis, University of California at Santa Barbara, December 1986), 98.

86. Final Completion Report, S. F. Merced Bridge, Yosemite Project 2-B2, 1 April 1932, 1-4, 10; Thomson, Superintendent's Monthly Report, October 1931, 8.

87. Johnston, 45-46.

88. Wawona Tunnel National Register nomination, Sec. 8, p. 2. N.B.: The original Inspiration Point was about a mile further east, and was the point from which the Mariposa Battalion first looked into Yosemite Valley.

89. Alfred Runte, *Yosemite: The Embattled Wilderness* (Lincoln: University of Nebraska Press, 1990), 170-71.

90. National Park Service, Press release, Wawona Road Reconstruction, September 1930.

91. Thomson, Superintendent's Monthly Report, April 1933, 9; Superintendent's Monthly Report, October 1933, 10.

92. Enid Michael, "Roadside Planting of the New Wawona Highway," *Yosemite Nature Notes*, Vol. XII No. 12, December 1937; "General Landscape Plan for Wawona," 1925, Yosemite National Park Maintenance and Engineering Office; Thomson, Superintendent's Monthly Report, November 1932, 7. Parts of the old road grade are still visible in places, particularly in the area north of Chinquapin where 1990 fires opened up the vegetation.

93. Runte, illustration 27; Wawona Tunnel National Register nomination, Sec. 8, p.4.

94. Quoted in Johnston, 46.

95. Wawona Tunnel National Register nomination, Sec. 7, p. 1; Linda Wedel Greene, II:784. The old road was opened again in 1990 for fire control purposes, and is being opened to maintenance vehicles again 1992 for the removal of the phone cable to Wawona, despite the fact that the route traverses through designated wilderness.

96. Project Completion Report 161, Armor Coat Paving, Mariposa Grove Road, September 1934. Yosemite National Park Maintenance and Engineering Office.

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98. Greene, II:860.

99. Harlan D. Unrau, *Historical Overview and Assessment of Significance of Stone Walls and Rock Work Along Glacier Point Road in Yosemite National Park* (Denver, CO: National Park Service, Denver Service Center, January 1990), 34.

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